

Date: Thu, 25 Feb 93 21:29:56 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #256
To: Info-Hams

Info-Hams Digest Thu, 25 Feb 93 Volume 93 : Issue 256

Today's Topics:

1 Watt = ? dBm ?

[To: info-hams: [PICA.ARMY.MIL FSAC3 Mail Syst: Failed mail (msg.aa27939)]]
 Caller ID & DTMF Chips For Sale
 Clinton's cuts
 Daily IPS Report - 25 Feb 93
 Daily IPS Report - 26 Feb 93
 diagnosing persnickety problems
 Elevated Radials
 Help with old B/W CCTV cameras
 How to login to nic.funet.fi ?
 Rechargeable Batteries???
 RF and Power Supply
 too darn big!
 Want to know best time for UK contacts
 WWV time (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 26 Feb 93 04:26:20 GMT
From: ogicse!emory!athena!aisun1.ai.uga.edu!mcovingt@network.UCSD.EDU
Subject: 1 Watt = ? dBm ?
To: info-hams@ucsd.edu

dBm means 'decibels relative to 1 milliwatt'.

So 1 milliwatt = 0 dBm
1 watt = 30 dBm
1 microwatt = -30 dBm

--

:- Michael A. Covington internet mcovingt@uga.cc.uga.edu : *****
:- Artificial Intelligence Programs phone 706 542-0358 : *****
:- The University of Georgia fax 706 542-0349 : * * *
:- Athens, Georgia 30602-7415 U.S.A. amateur radio N4TMI : ** *** **

Date: 25 Feb 93 20:54:07 GMT
From: news-mail-gateway@ucsd.edu
Subject: [To: info-hams: [PICA.ARMY.MIL FSAC3 Mail Syst: Failed mail
(msg.aa27939)]]
To: info-hams@ucsd.edu

----- Forwarded message # 1:

Date: Tue, 23 Feb 93 12:35:05 EST
From: Scott Ream (FSAC-PMD) <sream@PICA.ARMY.MIL>
To: info-hams@ucsd.edu
cc: sream@PICA.ARMY.MIL
Subject: [PICA.ARMY.MIL FSAC3 Mail Syst: Failed mail (msg.aa27939)]
Message-ID: <9302231235.aa28944@FSAC3.PICA.ARMY.MIL>

----- Forwarded message # 1:

Date: Tue, 23 Feb 93 12:31:20 EST
From: PICA.ARMY.MIL FSAC3 Mail System <mmdf@PICA.ARMY.MIL>
Sender: mmdf@PICA.ARMY.MIL
Subject: Failed mail (msg.aa27939)
To: sream@pica.army.mil
Message-ID: <9302231231.aa28493@FSAC3.PICA.ARMY.MIL>

Your message could not be delivered to
'infor-hams@ucsd.edu (host: ucsd.edu) (queue: smtp)' for the following
reason: ' <infor-hams@ucsd.edu>... User unknown'

Your message follows:

Date: Tue, 23 Feb 93 12:26:51 EST
From: Scott Ream (FSAC-PMD) <sream@PICA.ARMY.MIL>
To: infor-hams@ucsd.edu
cc: sream@PICA.ARMY.MIL

Subject: NET

Message-ID: <9302231226.aa27939@FSAC3.PICA.ARMY.MIL>

Hi Again.

Well I belong to the Sussex County Amateur Radio Club.

They have a Net every Wednesday Nights at 8:00PM Thats 0100Z

That end around 8:30 or 8:45 that should be 0130Z or 0145Z

But when the 2 meters Net ends then they QSY to the HF Rig.

The frequency for that HF Net is: 28.357.0 Please come and join us.

We want to hear from you.....

Drop in and say Hello.....

73s, DE KB2HKR

----- End of forwarded messages

----- End of forwarded messages

Date: 25 Feb 93 00:59:16

From: news.service.uci.edu!ucivax!ofa123!ofa123!Sean.Reigle!

f203.n103.z1.fidonet.org@network.UCSD.EDU

Subject: Caller ID & DTMF Chips For Sale

To: info-hams@ucsd.edu

-> Quoting from John Schuch to All on 19 Feb 93 05:14:13 ...

JS> If anyone is interested in buying single or small quantities of either

JS> Caller ID Receiver chips, or DTMF decoder chips, E-mail me and I'll

JS> send you the details.

I will be interested.

Sean.Reigle@f203.n103.z1.fidonet.org

--- GEcho 1.00/beta+

Date: 26 Feb 93 04:12:30 GMT

From: news-mail-gateway@ucsd.edu
Subject: Clinton's cuts
To: info-hams@ucsd.edu

There are no cuts in Clinton's cuts. All there is is more spending and more taxes to pay for it. Of 63 people I've asked so far, only one believes his line, and that naive soul believed him when he was running! As to Bentsen, he's (or was) my senator, sad to say, and his logic regarding the government subsidization of the airway isn't surprising: He also tried to tell the old folks a few years back that he was going to really do something for them with a new "medicare" program. Same guy, same ridiculous thinking.

Dube AB5AP <dube@cpdvax.csc.ti.com>

Date: 24 Feb 93 23:41:04 GMT
From: news.cerf.net!pagesat!olivea!sgigate!sgiblab!munnari.oz.au!metro!
mippet.ci.com.au!eram!dave@network.UCSD.EDU
Subject: Daily IPS Report - 25 Feb 93
To: info-hams@ucsd.edu

IPS RADIO AND SPACE SERVICES AUSTRALIA
Daily Solar And Geophysical Report
Issued at 2330 UT 24 February 1993
Summary for 24 February and Forecast up to 27 February
No IPS warning is current.

1A. SOLAR SUMMARY

Activity: low

Flares: none.

Observed 10.7 cm flux/Equivalent Sunspot Number : 135/087

1B. SOLAR FORECAST

	25 February	26 February	27 February
Activity	Low	Low	Low
Fadeouts	None expected	None expected	None expected

Forecast 10.7 cm flux/Equivalent Sunspot Number : 140/093

1C. SOLAR COMMENT

None.

2A. MAGNETIC SUMMARY

Geomagnetic field at Learmonth : quiet

Estimated Indices : A	K	Observed A Index 23 February
Learmonth	05 2212 2111	
Fredericksburg	05	08
Planetary	07	08

2B. MAGNETIC FORECAST

Geomagnetic field at Learmonth : quiet to unsettled

Ap : 10

2C. MAGNETIC COMMENT

None.

3A. GLOBAL HF PROPAGATION SUMMARY

Propagation conditions :

Low Lats: Normal.

Mid Lats: Normal.

High Lats: Normal.

PCA Event : None.

3B. GLOBAL HF PROPAGATION FORECAST

Propagation conditions are expected to be normal.

3C. GLOBAL HF PROPAGATION COMMENT

None.

4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY

MUFs at Sydney were near normal.

T index: 62

4B. AUSTRALIAN REGION IONOSPHERIC FORECAST

	25 February	26 February	27 February
MUFs	near normal	near normal	near normal
T index	70	70	70

Predicted Monthly T Index for February is 60.

4C. AUSTRALIAN REGION COMMENT

None.

--

Dave Horsfall (VK2KFU)
dave@esi.COM.AU

VK2KFU @ VK2RWI.NSW.AUS.OC
...munnar!esi.COM.AU!dave

Date: 25 Feb 93 23:23:55 GMT
From: news.cerf.net!pagesat!olivea!sgigate!sgiblab!munnari.oz.au!metro!
mippet.ci.com.au!eram!dave@network.UCSD.EDU
Subject: Daily IPS Report - 26 Feb 93
To: info-hams@ucsd.edu

IPS RADIO AND SPACE SERVICES AUSTRALIA
Daily Solar And Geophysical Report
Issued at 2330 UT 25 February 1993
Summary for 25 February and Forecast up to 28 February
No IPS warning is current.

1A. SOLAR SUMMARY

Activity: low

Flares: none.

Observed 10.7 cm flux/Equivalent Sunspot Number : 128/080

1B. SOLAR FORECAST

	26 February	27 February	28 February
Activity	Low	Low	Low
Fadeouts	None expected	None expected	None expected

Forecast 10.7 cm flux/Equivalent Sunspot Number : 125/077

1C. SOLAR COMMENT

None.

2A. MAGNETIC SUMMARY

Geomagnetic field at Learmonth : quiet

Estimated Indices :	A	K	Observed A Index 24 February
Learmonth	02	1100 2111	
Fredericksburg	06		05
Planetary	10		06

2B. MAGNETIC FORECAST

Geomagnetic field at Learmonth : quiet

Ap : 15

2C. MAGNETIC COMMENT

None.

3A. GLOBAL HF PROPAGATION SUMMARY

Propagation conditions :

Low Lats: Normal.

Mid Lats: Normal.

High Lats: Normal.

PCA Event : None.

3B. GLOBAL HF PROPAGATION FORECAST

Propagation conditions are expected to be normal.

3C. GLOBAL HF PROPAGATION COMMENT

None.

4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY

MUFs at Sydney were near normal to slightly enhanced.

T index: 87

4B. AUSTRALIAN REGION IONOSPHERIC FORECAST

	26 February	27 February	28 February
MUFs	enhanced about 20%	enhanced about 20%	near normal
T index	90	90	70

Predicted Monthly T Index for February is 60.

4C. AUSTRALIAN REGION COMMENT

None.

--

Dave Horsfall (VK2KFU)
dave@esi.COM.AU

VK2KFU @ VK2RWI.NSW.AUS.OC
...munari!esi.COM.AU!dave

Date: Thu, 25 Feb 1993 21:26:48 GMT

From: dog.ee.lbl.gov!pasteur!agate!howland.reston.ans.net!gatech!taco!

csemail.cropsci.ncsu.edu!samodena@network.UCSD.EDU

Subject: diagnosing persnickety problems

To: info-hams@ucsd.edu

In article <QB8CEB2F@mmmpc6> hlester@as.arizona.edu (Howard Lester) writes:
>swr problems after transmitting a short time. I suspected overheating and
>damage to the tuner's little internal balun, so I bought a Radio Works
>"remote balun", a 6' length of super duper coax with crimp connectors
>installed, and a right angle UHF adapter. The woman on the phone said they
>were out of the "good" adapters; all they have is the cheaper
>"spring-loaded" ones. I bought one anyway, and that was a mistake. However,
>the mistake is a learning experience, and I now know better than to scrimp

>I view it with suspicion and I have seen the article by Christman.
>Here are some reasons:

>You have to know a lot more about the system. E.g. results are
>affected by the height of the ground plane above ground. The
>length of the radials has a great affect; as radials are
>lengthened beyond several wavelengths you see a kind of
>damped sine wave, but at the beginning of this affect the
>self-impedance of a 1/4 vertical, instead of the expected
>37 ohms it might be 80 to 150 ohms. I hasten to add,
>however, if depressing the takeoff angle is what you
>are after that is the way to go, whether the radials
>are raised or on the ground.

>The system is affected mightily by whether the ends of the
>raised radials are joined by a circular wire around the edge
>(the same as happens with a top hat). Finally, is there a sneak
>path via the earth to the transmitter? If so, now we must know
>how good the earth conductivity path is and how long it is.
>(There was a raised radial article in QST some years ago where
>this point was entirely ignored).

>A fellow by name of Wiener up at Mitre has done extensive work
>with large radial systems and if you can wade through all
>the data you finally conclude that there ain't no free
>lunch. The worst thing you can do with a radial system
>is to bury it too deep. (;-) That doesn't happen until
>you get quite high in frequency.

>BTW, Wiener's data did not raise the radials very far above
>earth--as I recall, not more than what would amount to a
>few inches above ground at 80meters.

>Bob Lewis, w2ebs, one of the co-inventors of the common
>vertical used at VHF (the one with a 1/4 wavelength
>vertical and four 1/4 w.l. radials) says that his study
>of the vertical radiation pattern could be likened to
>a scalloped candy dish, i.e. the takeoff angle drops
>lowest over each radial and then rises in the sector
>between radials. He says it's a good antenna for the
>application (local point-to-point) but he wouldn't
>recommend it for DX-ing).

>Forrest Gehrke feg@dodger.att.com k2bt

Forrest has had much more experience than I have at actually digging out
DX with verticals. I did run an experiment many years ago which is relevant,
though. I built a 20-meter ground plane antenna (quarter wave vertical with

four quarter-wave horizontal radials) and measured its input impedance at several heights above ground (with the help of Wes, W7ZOI). Ground here in the summer, when the tests were run, is in the category regarded as "poor". This was long before Al Christman's QST paper. I knew that a GP had an input resistance close to the theoretical 36 or so ohms, but that a ground-mounted vertical with the same radial system had a higher resistance (over 50 ohms for poor ground) due to ground loss. The question was, how high did the antenna have to be to become independent of the ground as far as loss was concerned? The answer was, not very far. I don't have the notes here at work but as I recall, the loss began dropping almost immediately as the antenna and ground system were raised. When the ground system reached about 4 feet high, the feedpoint R had dropped close to 36 ohms, indicating essentially zero ground loss.

I had read a theoretical paper which used a wire grid for a ground plane model. The author had stated that the antenna became independent of the ground when the height of the grid was $1/(2\pi)$ of the grid wire spacing. With the 4 16' radials I was using, the distance between radial tips was about 21'. $1/(2\pi)$ of this is 3.3', in the ballpark of the figure in the paper. I've always assumed, but haven't proved, that the antenna would become independent at half the height if twice the number of radials were used. As I recall, Al Christman showed similar results in his paper. I don't know what would happen with longer or shorter radials, except that the elevated antenna would have a significantly changed resonant frequency.

You've got to realize that this is an exercise only in reducing ground loss, not in improving radiation angle or loss of low-angle field strength due to reflection from lossy ground far from the antenna. At least at low heights, I don't feel that elevating the radial system will have an appreciable effect on low-angle radiation. Improved efficiency will increase the field strength equally at all angles.

When radials are lying on the ground, they form a very low-Q system, so changing radial length has a very small effect on feedpoint reactance and antenna resonant frequency. As the system is raised, the Q goes up and radial length changes have a much more pronounced effect. I'm not surprised that a perimeter wire makes a large difference.

Good field-strength measurements would be the best real test. MININEC is incapable of modeling these effects, but NEC should be able to. Perhaps someone who has access to that program (and the patience required to run it) would give it a try. I'd be interested in seeing what it has to say.

My opinion is that raising a radial system to a height of at least $1/6$ the tip-to-tip distance between radial ends will reduce the ground losses to a very low level. Lower heights will improve loss to a lesser degree. No appreciable change in pattern shape will result. The tradeoffs are the mechanical complexity of a raised radial system and the hazard caused by

Roy Lewallen
W7EL
royle@tekig6.pen.tek.com

I have found someone willing to sell me several old (B/W?) CCTV cameras. We have not, however, talked about a price, so help along that line would be appreciated! The only markings, etc. I could glean from the units themselves are as follows:

GBC CCTV CORP.
New York, NY.

There are two connections on the back of the units: POWER, and VIDEO OUT. Unfortunately, all but one are labeled 'PARTS' underneath, so sources for schematics and such are very much in need.

I have no idea what the power/current/voltage requirements, etc... of the cameras are, so any help there would be appreciated. Also, what would the cameras/monitors be worth?

— —

[illegible]

Date: Wed, 24 Feb 93 23:28:14 EST
From: anomaly.sbs.com!n1mpq!system@uunet.uu.net
Subject: How to login to nic.funet.fi ?
To: info-hams@ucsd.edu

ron@topaz.bds.com (Ron Natalie) writes:

```
> > > IQC109 at URIACC.URI.EDU      This is my correct address. The host refuses
> > > accept this and insists that I have made anvalid logon.
>
> This is not your correct address.  Real addresses have an "@" rather than
> the word "at" which went out of the mail standard ten years ago.  nic.funet.f
> accepts IQC109@URIACC.URI.EDU just fine.
>
> Actually, it will accept anything as long as it has an "@" in it.  I just
> connected using "foo@bar"
>
> -Ron
```

Yeah but the URI system is a VM/ESA and pretty damned finicky. If you try to place an @ anywhere in the password, it deletes it.

Tony

```
-----
-- Tony Pelliccio, N1MPQ/AA           // Why do some hams run 20mW      //
-- god @ garlic.sbs.com               // into a stub-ducky in a car    //
-----// and wonder why they can't  //
-- Flame Retardent Sysadmin          // hit a repeater?              //
-----
-- A man who feels sees life as a tragedy, a man who thinks sees --
-- life as a comedy. (As found in a fortune cookie)              --
-----
```

```
-----
Date: 26 Feb 93 04:27:32 GMT
From: ogicse!emory!athena!aisun1.ai.uga.edu!mcovingt@network.UCSD.EDU
Subject: Rechargable Batteries???
To: info-hams@ucsd.edu
```

Probably what you're seeing is that NiCd cells are 1.25 volts, so a fully charged NiCd looks like a weak conventional battery.

But it will stay at 1.25 V a rather long time. So even though it reads low on the battery meter, it won't get any lower for quite a while. If the radio works OK, use it.

```
--
:- Michael A. Covington      internet mcovingt@uga.cc.uga.edu :      *****
:- Artificial Intelligence Programs      phone 706 542-0358 :      *****
```

: - The University of Georgia fax 706 542-0349 : * * *
: - Athens, Georgia 30602-7415 U.S.A. amateur radio N4TMI : ** *** **

Date: 22 Feb 93 06:19:07 GMT
From: news.cerf.net!pagesat!olivea!sgigate!sgiblab!muninari.oz.au!metro!
mippet.ci.com.au!eram!dave@network.UCSD.EDU
Subject: RF and Power Supply
To: info-hams@ucsd.edu

In article <9302190039.AA17926@netmail.microsoft.com>,
a-kevinp@microsoft.COM (Kevin Purcell, Rho) writes:

| Hmmm, killing yourself to kill an earth loop. Good trade off, eh!

It's not often you get to observe evolution in action :-)

--

Dave Horsfall (VK2KFU) VK2KFU @ VK2RWI.NSW.AUS.OC
dave@esi.COM.AU ...muninari!esi.COM.AU!dave

Date: 25 Feb 93 11:34:00 GMT
From: ogicse!uwm.edu!cs.utexas.edu!asuvax!chnews!facom1!chilton@network.UCSD.EDU
Subject: too darn big!
To: info-hams@ucsd.edu

>>>keep up with. How many people would like to see some division? Maybe

I am all for splitting. I am very interested in a group for those who
design / build / troubleshoot / optimize their own equipment.

Date: Thu, 25 Feb 1993 14:34:17 GMT
From: beta.lanl.gov!tjf@lanl.gov
Subject: Want to know best time for UK contacts
To: info-hams@ucsd.edu

Hi...I currently reside in New Mexico and have had some very good
DXing to Asia, S. America and Oceania. So far, however, I have had
absolutely no luck with Northern Europe (Or Africa for that matter).
I can often hear (on 10m voice) East Coast stations talking to
Europe, but I can't hear the replies. What is the best time to make
voice and CW contacts into N. Europe for me? One problem is the time change
of course. I usually switch from the Novice voice band to 40m/80m CW around

00:00-01:00 UTC and go to bed by 06:00 UTC. I am 7 hours behind UTC.

If I stay up till the wee hours, or get up in the wee hours, will I be able to use 1) SSB on 10m (yes, I know about the lousy sunspots) or 2) CW on 40 or 80m?

The closest I've gotten to Europe or Africa was a station in Turkey on CW.

Advice (especially from others in 5-land) is most appreciated!

Date: 25 Feb 93 01:03:59
From: news.service.uci.edu!ucivax!ofa123!ofa123!Sean.Reigle!
f203.n103.z1.fidonet.org@network.UCSD.EDU
Subject: WWV time
To: info-hams@ucsd.edu

Anyone have information on the tones of WWV time at 2.5, 5, 10, 15, and 20 megacycles? I am trying to build an interface for the computer to interface the WWV time to sync the computer clock or another clock...

Sean

--- GEcho 1.00/beta+

Date: Fri, 26 Feb 1993 02:20:54 GMT
From: news.service.uci.edu!ttinews!harley!paulb@network.UCSD.EDU
Subject: WWV time
To: info-hams@ucsd.edu

In article <342521125@ofa123.fidonet.org> Sean.Reigle@f203.n103.z1.fidonet.org writes:

+Anyone have information on the tones of WWV time at 2.5, 5, 10, 15, and 20
+megacycles? I am trying to build an interface for the computer to
+interface the WWV time to sync the computer clock or another clock...

I don't know if it is worth it. According to my watch, WWV is off by 20 seconds.

Reagan and Bush were the two best Presidents that the Japanese ever had

Paul Blumstein, paulb@harley.tti.com, DoD #36, ABATE, AMA, HOG, KD6LAA
Transaction Technology, Inc., Santa Monica, CA

Date: 22 Feb 93 00:39:21 GMT
From: news.cerf.net!pagesat!olivea!sgigate!sgiblab!munnari.oz.au!metro!
mippet.ci.com.au!eram!dave@network.UCSD.EDU
To: info-hams@ucsd.edu

References <C29n0r.AL3@csn.org>, <C2LvDz.5op@icon.rose.hp.com>,
<C2M7Bp.DLH@avalon.nwc.navy.mil>ipp
Subject : Re: QUESTION Re: DJ580 Mods (legal/ethical)

In article <C2M7Bp.DLH@avalon.nwc.navy.mil>,
erik@peewee.nwc.navy.mil (Erik van Bronkhorst) writes:

| I wonder; is it illegal to possess a radio *capable* of transmitting
| out of band? Or is it only illegal to actually *transmit* out of
| band?

In Australia, it is a major offence to even *possess* a rig that has
been modified (as opposed to say, a wide VF0) to transmit out of the
band it was intended for; up to 5 years gaol and \$10,000 fine.

There is a thriving black market for converting Amateur-only rigs for
marine use etc, since Amateur stuff attracts much less customs duty than
proper type-approved commercial stuff, and is cheaper. Modifications
to "open them up" will threaten this minimal duty status, and those who
manufacture such easily-modified rigs are cutting their own balls off.

--
Dave Horsfall (VK2KFU) VK2KFU @ VK2RWI.NSW.AUS.OC
dave@esi.COM.AU ...munnari!esi.COM.AU!dave

End of Info-Hams Digest V93 #256
